METHOD AND APPARATUS FOR ELIMINATING THE NEED FOR REGISTER ASSIGNMENT, ALLOCATION, SPILLING AND RE-FILLING

ABSTRACT OF THE DISCLOSURE

A method and apparatus is provided to manage data in computer registers in a program,

5   making more computer registers available to one or more programmers utilizing a name level instruction. The method and apparatus disclosed herein presents a way of reducing the overhead of register management, by introducing a concept of a name level for each of the named architected registers in a processor. The method provides a programmer with a larger register name-space while not increasing the size of the instruction word in the processor

10   instruction-set architecture. It also provides for the facilitation of architectural features which overload the architected register namespace and ease the overhead of register management. This provides for the addition of more computer registers without changing the instruction format of the computer.